

South Coast Air Quality Management District

Statement of Basis

Proposed Title V Renewal Permit

Facility Name:	AES Huntington Beach
Facility ID:	115389
SIC Code:	4911
Equipment Location:	21730 Newland St Huntington Beach, CA 92646
Application #(s):	426085
Application Submittal Date(s):	02/13/04
AQMD Contact Person:	Chris Perri, Air Quality Engineer
Phone Number:	(909) 396-2696
E-Mail Address:	cperri@aqmd.gov

1. Introduction and Scope of Permit

Title V is a national operating permit program for air pollution sources. Facilities subject to Title V must obtain a Title V permit and comply with specific Title V procedures to modify the permit. This permit replaces the facility's other existing permits. Title V does not necessarily include any new requirements for reducing emissions. It does, however, include new permitting, noticing, record keeping, and reporting requirements.

Pursuant to Title V of the federal Clean Air Act and AQMD Rule 3004(f), a Title V permit shall expire five years after the date of issuance, unless such permit has been renewed. Accordingly, each facility is required to submit a Title V renewal application and request that the AQMD renew their Title V permit. The proposed permit incorporates updates to the facility information provided in the facility's Title V renewal application and all rules and regulations that are currently applicable to the facility.

The AQMD implements Title V through Regulation XXX – Title V Permits, adopted by the AQMD Governing Board in order to comply with EPA's requirement that local air permitting authorities develop a Title V program. Regulation XXX was developed with the participation of the public and affected facilities through a series of public workshops, working group meetings, public hearings and other meetings.

The Title V major source threshold for a particular pollutant depends on the attainment status of the pollutant. NO₂, SO₂, CO, and lead are in attainment with federal standards. The status for

PM-10 is serious nonattainment. The status for ozone is currently extreme nonattainment. For the South Coast Air Basin (SOCAB) the threshold levels are as follows:

Pollutant	SOCAB Major Source Thresholds
VOC	10
NOx	10
SOx	100
CO	50
PM-10	70
Single HAP	10
Combination of HAPS	25

A Title V permit is proposed to be issued to cover the operations of AES Huntington Beach, located at 21730 Newland Avenue, Huntington Beach. This facility is subject to Title V requirements because it is a major source of one of more criteria pollutants.

2. Facility Description

This is an existing facility that is in the business of producing electrical power for the California energy market. This facility operates 4 natural gas-fired utility boiler/steam turbine generators, all 4 units are equipped with SCR, and the two larger units are equipped with CO oxidation catalysts. There are also two diesel-fueled fire pump engines, and one 30,000 gallon urea storage tank. The approximate total facility generating capacity is 1,310 MWs. Under Rule 2009, Boilers 1 and 2 are subject to a BARCT limit of 7 ppm NOx at 3% O2, while Boilers 3 and 4 are subject to a BACT limit of 5 ppm NOx.

3. Construction and Permitting History

The facility was originally constructed in the late 1950's, and consisted of 4 utility boiler/steam turbine generators, as well as a set of 8 Pratt & Whitney turbine engines. Original permits for the boilers were issued by the Orange County APCD in 1959. Urea injection systems were installed on Boilers 1 and 2 in the early 1990's. The controls were later removed because of ineffectiveness and corrosion problems. The facility also went through an ownership change in 1998 from SCE to its current owner – AES. Boilers 3 and 4 were taken out of service in 1995, but later retooled, re-permitted, and brought back on line in 2001. Since the issuance of the initial Title V permit to the facility, there have been several subsequent revisions. There was a minor permit revision to add the SCRs for Boilers 1 and 2 in 2001. Also in 2001, there was a significant permit revision when Boilers 3 and 4 were issued their Permits to Construct. Administrative revisions to the permits for Boilers 3 and 4 were issued in December 2001, February 2002, and August 2002. A minor permit revision for Boilers 3 and 4 was issued in June of 2002. In 2002 the 7 ppm NOx BARCT limits were added to Boilers 1 and 2 as a minor permit revision. The Pratt and Whitney engines were removed from the permit in October of 2002 as an administrative revision. There was an administrative revision in 2003 for SCRs 1 and 2. And finally, a minor revision was issued in 2006 to add 2 emergency diesel fire pump engines.

4. Regulatory Applicability Determinations

Applicable legal requirements for this facility are required to be identified in the Title V permit (for example, Section D, E, and H of the proposed Title V permit). Applicability determinations (i.e., determinations made by the District with respect to what legal requirements apply to a specific piece of equipment, process, or operation) can be found in the Engineering Evaluations.

The following summarizes the key rules that apply to the major equipment at this site:

Utility Boilers

401 – Visible Emissions

402 – Nuisance

407 – Liquid and Gaseous Air Contaminants (CO and SO_x)

409 – Combustion Contaminants (PM)

Regulation XIII – BACT (NO_x, CO, ROG, PM₁₀, SO_x) Boilers 3 and 4 only

Rule 2009.1 – BARCT (NO_x) Boilers 1-4

2011 – SO_x RECLAIM (monitoring, record keeping, and reporting of SO_x, SO_x cap)

2012 – NO_x RECLAIM (monitoring, record keeping, and reporting of NO_x, NO_x cap)

Regulation XXX – Title V

40CFR Part 72 – Acid Rain (SO₂)

40CFR Part 60 Subpart Da (NO_x, SO₂, PM) Boilers 3 and 4 only

Emergency Engines

401 – Visible Emissions

402 - Nuisance

431.2 – Sulfur Content of Liquid Fuels (SO_x)

Regulation XIII – BACT (NO_x, CO, ROG, PM₁₀, SO_x)

Rule 1470 – Air Toxic Control Measure (PM₁₀)

2012 – NO_x RECLAIM

Regulation XXX – Title V

The facility is not a major source of HAPs and therefore is not subject to any MACT standards. Total potential HAP emissions are approximately 1 tpy, and there is no single HAP over 600 lbs/yr. There are no area source MACT standards which apply to this facility. 40 CFR Parts 72-78 (Acid Rain) requirements apply to the boilers. Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64 do not apply to the Boilers 3 and 4 because 1) the boilers use continuous emissions monitors for NO_x and CO [exempt by continuous compliance determination of section 64.2(b)(vi)], and 2) there is no PM₁₀, VOC, or SO_x control equipment. Similarly, CAM does not apply to Boilers 1 and 2 because the boilers use continuous emissions monitors for NO_x, and there is no control equipment for CO, PM₁₀, VOC, or SO_x. 40CFR 60 Subpart Da NSPS does apply to Boilers 3 and 4 because of their heat input rating and construction date. The NO_x, SO_x, and PM NSPS emission limits are listed in the permit and the facility has performed the required source testing to show compliance with the limits.

The permit terms and conditions may be found in Section D of the Title V permit.

5. Monitoring and Operational Requirements

Applicable monitoring and operational requirements for which the facility is required to comply are identified in the Title V permit (for example, Section D, F, and J, and Appendix B). Discussion of any applicable monitoring and operational requirements can be found in the Engineering Evaluations. All periodic monitoring requirements were developed using strict adherence to the following applicable guidance documents: SCAQMD Periodic Monitoring Guidelines for Title V Facilities (November 1997), CAPCOA/CARB/EPA region IX Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP (June 1999), and CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources (July 2001).

Under the RECLAIM program, the boilers are required to maintain a CEMS for NOx emissions, and report daily mass emissions through the RTU, as well as measure the exhaust temperature into the SCR, the ammonia injection rate and exhaust O2. As part of the CEMS, the boilers are also required to be equipped with fuel flow meters. Under the Acid Rain provisions, the plant is required to monitor SO2 emissions through use of fuel gas meters and gas constituent analysis (use of emission factors for reporting emissions is also acceptable in certain cases). Boilers 3 and 4 are required to maintain a CO CEMS, and report CO emissions every six months to AQMD under Rule 218.

6. Permit Features

Permit Shield

A permit shield is an optional part of a Title V permit that gives the facility explicit protection from requirements that may be incorrectly specified in the permit. A permit shield is a provision in a permit that states that compliance with the conditions contained in the permit shall be deemed compliance with all identified regulatory requirements. To incorporate a permit shield into the Title V permit involves submission of applications for change of conditions for each equipment affected by the permit shield. Permit shields are addressed in Rule 3004 (c). This facility has not applied for a permit shield.

Streamlining Requirements

Some emission units may be subject to multiple requirements which are closely related or redundant. The conditions may be streamlined to simplify the permit conditions and compliance. Emission limits, work practice standards, and monitoring, recordkeeping, and reporting requirements may be streamlined. Compliance with a streamlined condition will be deemed compliance with the underlying requirements whether or not the emission unit is actually in compliance with the specific underlying requirement. This facility has not applied for any streamlined conditions.

7. Summary of Emissions and Health Risks

**Criteria Pollutant Emissions (tons/year)
Annual Reported Emissions for Reporting Period 2010**

Pollutant	Emissions (tons/year)
NOx	26.15
CO	800.58
VOC	12.29
PM	16.35
SOx	4.22

**Toxic Air Contaminants Emissions (TAC)
Annual Reported Emissions for Reporting Period 2010**

The Following TACs Were Reported	Emissions (lbs/yr)
1,3 Butadiene	0.016
Ammonia	20,048
Benzene	23.18
Formaldehyde	49.12
Naphthalene	4.09
Polynuclear aromatic hydrocarbons (PAHs)	1.36

Health Risk from Toxic Air Contaminants

The facility is subject to review by the Air Toxics Information and Assessment Act (AB2588). The final Facility Health Risk was approved in 2000 with the following risk factors:

Cancer Risk	0.11 in one million
Acute Hazard Index	0.00
Chronic Hazard Index	0.00

8. Compliance History

As noted, the facility has been in constant operation since the 1950's. The facility has been subject to both self-reporting requirements and AQMD inspections. The facility has had 1 citizen complaint filed, 2 Notices to Comply issued, and 0 Notices of Violation issued in the last two calendar years. All Notices to Comply and citizen complaint have been resolved and facility is currently in compliance.

9. Compliance Certification

By virtue of the Title V permit application and renewal of this permit, the reporting frequency for compliance certification for the facility shall be annual.